

CLAIMS

1. A photosensitive resin printing plate material, which comprises at least a support, a photosensitive resin layer and a photocoloring layer, and in which the photocoloring layer is UV-transmissive before colored, and is colored through exposure to light having a wavelength of from 450 to 1500 nm to be substantially UV-non-transmissive.
2. The photosensitive resin printing plate material as claimed in claim 1, wherein the photocoloring layer contains at least a photothermal-transforming substance, a thermal color former and a developer.
3. The photosensitive resin printing plate material as claimed in claim 1, wherein the photocoloring layer comprises at least a layer that contains a photothermal-transforming substance and a layer that contains a thermal color former and a developer.
4. The photosensitive resin printing plate material as claimed in claim 2 or 3, wherein the photothermal-transforming substance is at least one dye selected from cyanine dyes, polymethine dyes and naphthalocyanine dyes.
5. The photosensitive resin printing plate material as claimed in claim 3, wherein the layer that contains a thermal color former and a developer is UV-transmissive before heated, and is colored, after heated, to be substantially UV-non-transmissive.

6. The photosensitive resin printing plate material as claimed in any of claims 1 to 5, wherein the photosensitive resin layer is photocured when exposed to light having a wavelength of from 300 to 450 nm, and its thickness falls between 0.1 mm and 10 mm.

7. The photosensitive resin printing plate material as claimed in any of claims 1 to 6, wherein the photosensitive resin layer contains at least one polymer selected from a group consisting of partially-saponified polyvinyl acetate, polyamide resin, polyvinyl alcohol, and their modified derivatives, at least along with an ethylenic unsaturated compound and a photopolymerization initiator.

8. The photosensitive resin printing plate material as claimed in any of claims 1 to 7, which has a substance transfer-preventing layer between the photosensitive resin layer and the photocoloring layer.

9. The photosensitive resin printing plate material as claimed in claim 8, wherein the substance transfer-preventing layer contains a binder resin selected from hydrophilic resins, hydrophobic resins and UV-curable resins.

10. A method for producing a photosensitive resin printing plate, which comprises at least a step of forming an image in a photocoloring layer, a step of exposing a photosensitive resin layer to light through the photocoloring layer, and a step of developing the photosensitive resin layer.

11. A method for producing a photosensitive resin printing plate, wherein a photosensitive resin printing plate material having a photosensitive resin layer and a photocoloring layer laminated on a support is imagewise exposed to light having a wavelength of from 450 to 1500 nm whereby only the exposed site of the photocoloring layer is colored to form an image in the layer, then this is further exposed to light having a wavelength of from 300 to 450 nm via the image-having, photocolored layer to thereby imagewise cure the photosensitive resin layer, and thereafter this is processed with a developer so as to remove the resin layer except the cured resin to thereby form a relief image on the support.

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